



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/609,102

06/30/2003

Krishna Rao Boyapati

132479

9234

6147 7590 03/07/2007  
GENERAL ELECTRIC COMPANY  
GLOBAL RESEARCH  
PATENT DOCKET RM. BLDG. K1-4A59  
NISKAYUNA, NY 12309

EXAMINER

RIDLEY, BASIA ANNA

ART UNIT

PAPER NUMBER

1764

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

03/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/609,102	<b>Applicant(s)</b> BOYAPATI ET AL.	
	<b>Examiner</b> Basia Ridley <i>BR</i>	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Invention II, claims 22-30, in the reply filed on 12 February 2007 is acknowledged. The traversal is on the ground(s) that the species require search of the same technical arts, therefore the search and examination of the entire application can be made without a serious burden. This is not found persuasive because establishing that the inventions are classified in different classes and/or subclasses establishes that a serious burden exists on the examiner if restriction is not required.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention, there being no allowable generic or linking claim.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (USP 4,476,249) in view of Wolf (WO 01/38456).

Regarding claims 22 and 30, Avery discloses a system for co-producing hydrogen and electrical power comprising:

- an energy generating system (20) for generating energy from an intermittent renewable energy source;

Art Unit: 1764

- a production system (16) in energy communication with said energy generating system (20) for producing hydrogen and oxygen;
- a hydrogen-delivery system in fluid communication with said production system (16) for receiving at least a portion of said hydrogen from said production system (Fig. 1); said hydrogen-delivery system further configured to channel at least a portion of said hydrogen to at least one of a power generation system or a hydrogen storage system (Fig. 1); and
- an oxygen delivery system in fluid communication with said production system (16) for receiving at least a portion of said oxygen from said production system (16);
- said oxygen delivery system further configured to channel at least a portion of said oxygen to a gasification system (10);
- wherein said gasification system (10) is further configured to channel at least a portion of a synthesis gas to said power generation system (Fig. 1).

While Avery does disclose that said gasification system gasifies coke, the reference does not disclose said coke being obtained from biomass.

Wolf teaches the system for gasification of coke obtained from biomass by use of oxygen obtained from a production system in energy communication with an energy generating system for generating energy from an intermittent renewable energy source (Fig. 1, abstract).

It would have been obvious to one having ordinary skill in the art at the time of the invention to use coke obtained from biomass in the system of Avery, as taught by Wolf, since doing so would amount to nothing more than a use of a known material for its intended use in a known environment to accomplish entirely expected result.

Regarding limitations recited in claim 30 which are directed to a manner of operating

Art Unit: 1764

disclosed system, neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.”

Regarding claims 23-28, Avery in view of Wolf disclose all of the claim limitations as set forth above. Additionally Avery discloses the system further comprising:

- a hydrogen-reforming system (12) for reforming said hydrogen from at least a portion of said synthesis gas ; wherein said hydrogen-reforming system (12) is further configured to channel said hydrogen from said hydrogen-reforming system to said hydrogen-delivery system (Fig. 1);
- wherein said power generation system comprises a hydrogen-based electricity production system (28);
- wherein said hydrogen-based electricity production system (28) comprises at least one of fuel cell-based electricity production system or a micro-turbine-based electricity production system or an internal combustion engine-based electricity production system or a combination thereof (Fig. 1);
- wherein said intermittent renewable energy comprises at least one of wind energy or solar energy or tidal energy (abstract);
- wherein said energy comprises at least one of thermal energy or electrical energy (abstract);
- wherein said production system is selected from the group consisting of an electrolysis system, a thermal splitting system, an electro-thermal splitting system, a thermo-chemical

Art Unit: 1764

splitting system, a photo-chemical splitting system, a photo-electrochemical splitting system and combinations thereof (abstract).

Regarding claim 29, while Avery does not explicitly disclose any specific design of said gasifier, said gasifier would, inherently comprises at least one of a fixed bed gasification system or a fluidized bed gasification system.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Conclusion*

6. In view of the foregoing, none of the claims are allowed.

7. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1764.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Basia Ridley, whose telephone number is (571) 272-1453.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 1764

Technical Center 1700 General Information Telephone No. is (571) 272-1700. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Basia Ridley', written in a cursive style.

Basia Ridley  
Primary Examiner  
Art Unit 1764

BR

March 2, 2007